The SusCity platform

presentation and perspectives over the future

Presenters

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Contents

First part – past & present

Second part – live presentation

Third part – impact & future

Vision

An easy to use digital platform with real time information about Lisbon as a sensing city using:

- Real time data (from sensors);
- Historical data.

The platform receives data, cleans, transforms, relates and processes it to provide useful information both for humans and machines.

Data

WP1 - Buildings Archetypes, Energy Consumption Scenarios

WP4 - Mobility Data

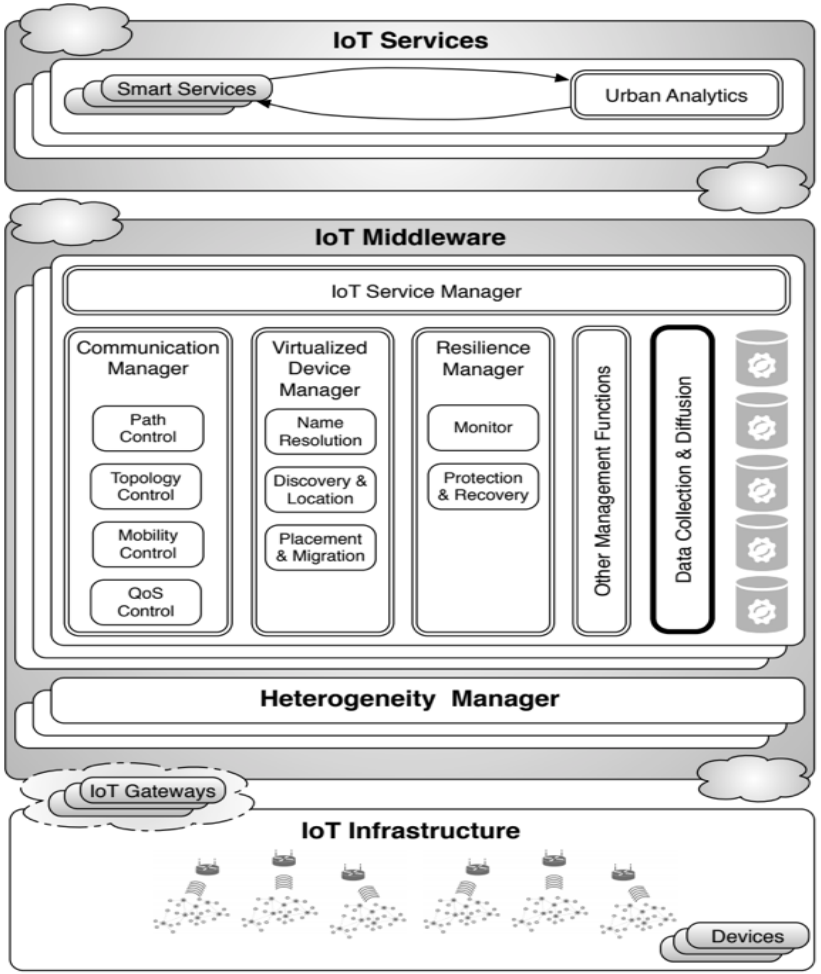
WP5 - Energy Grid

What and how we did it

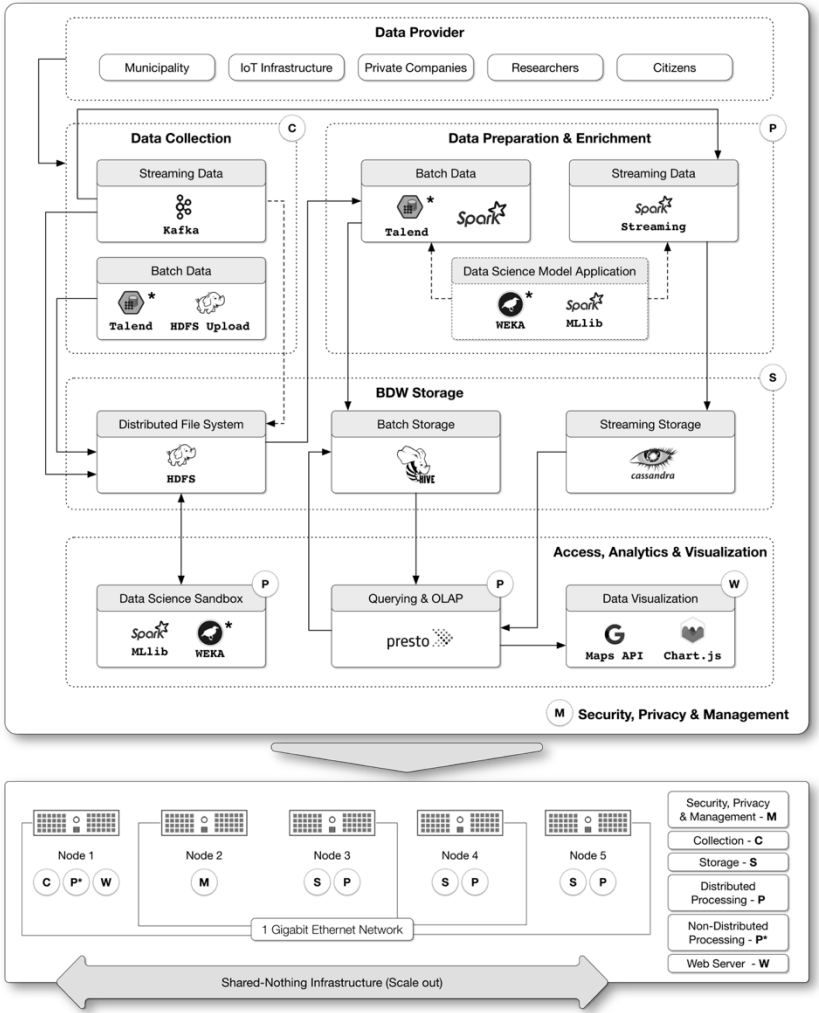
- IoT architecture;
- Big Data Architecture;
- Smart city platform with Dashoboards (human readable data);
- Linked Open Data platform (machine readable data).

Design Science Research approaches

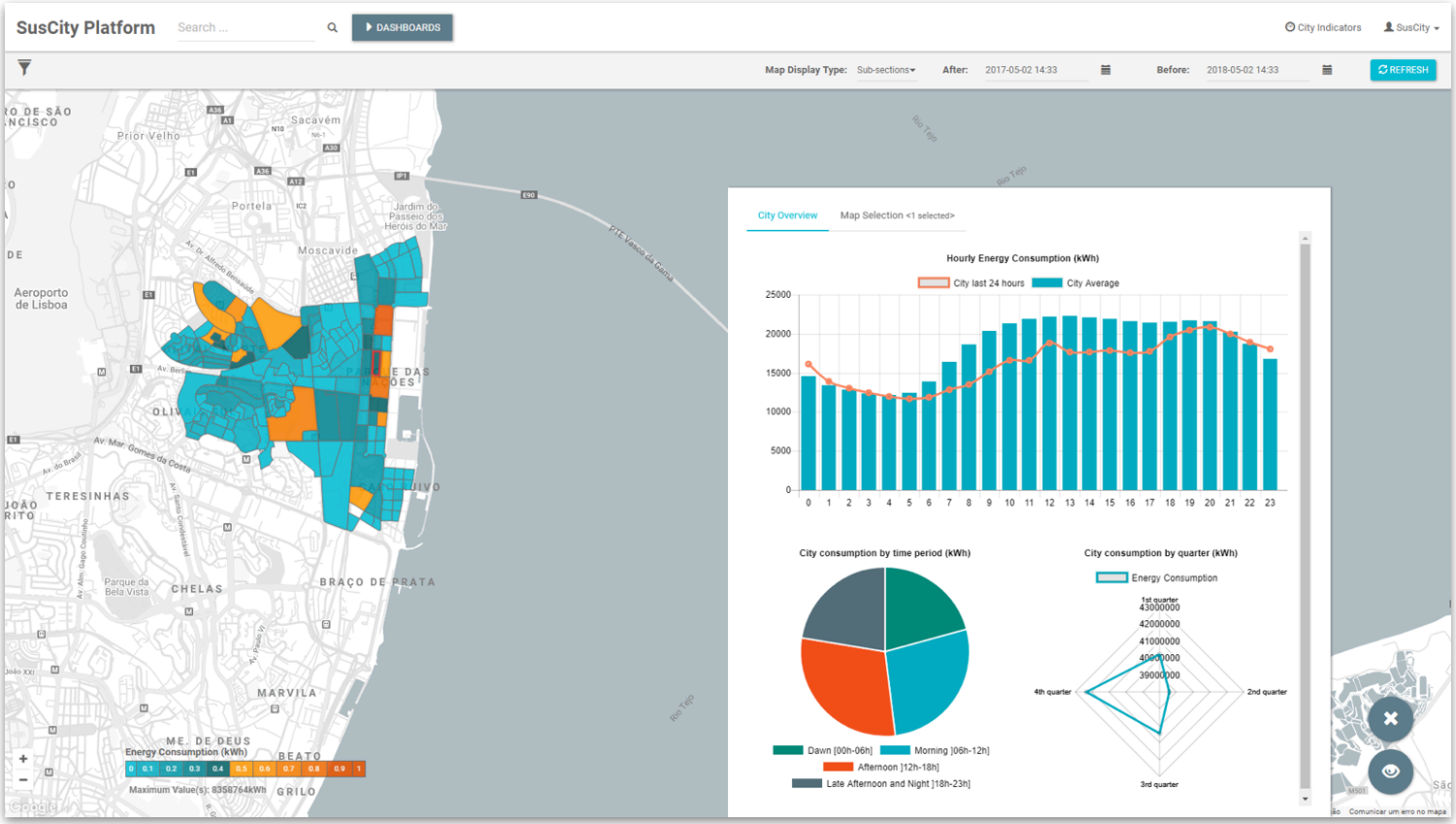
IoT Architecture



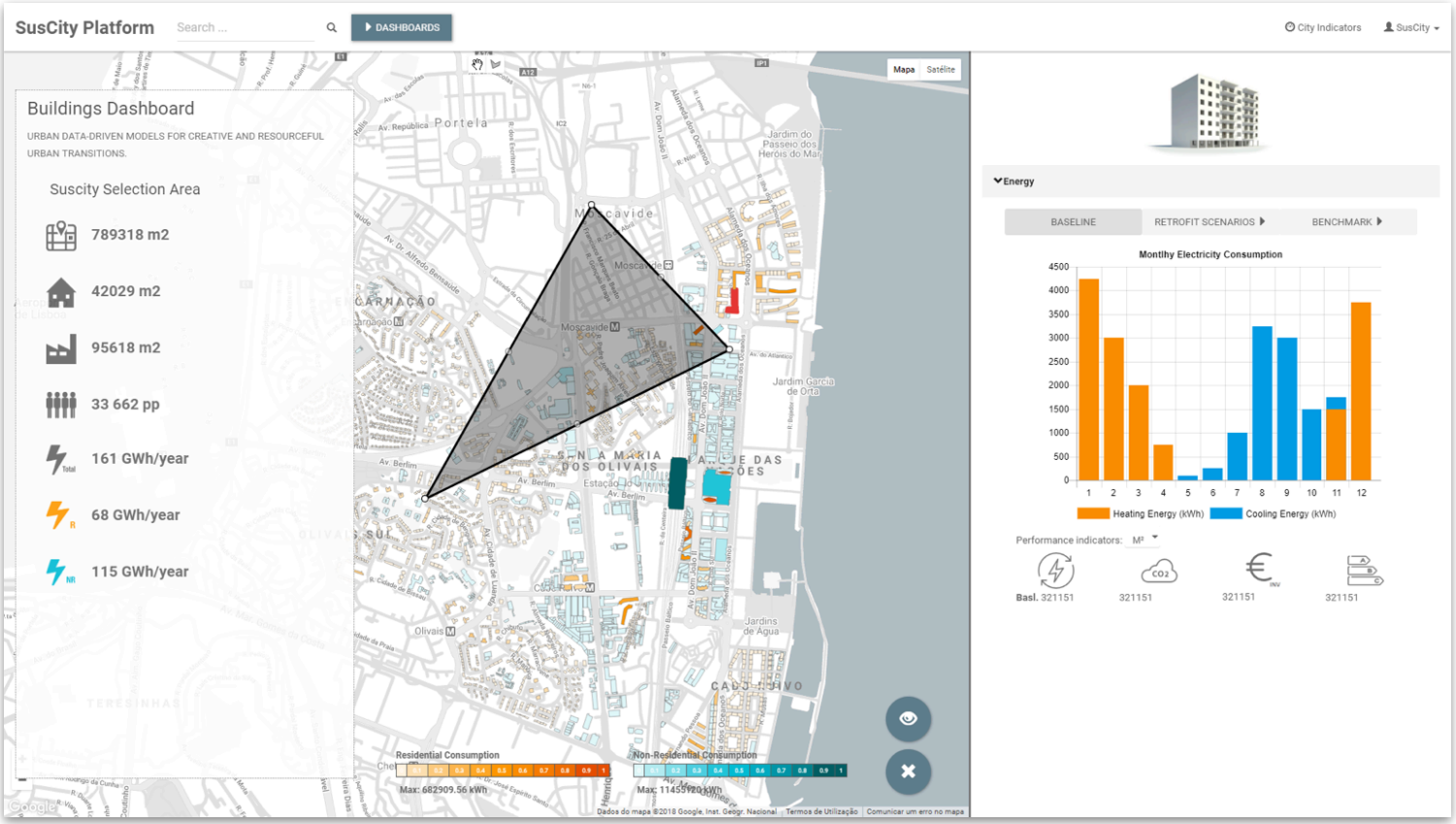
Big Data Architecture



Dashboards - Energy

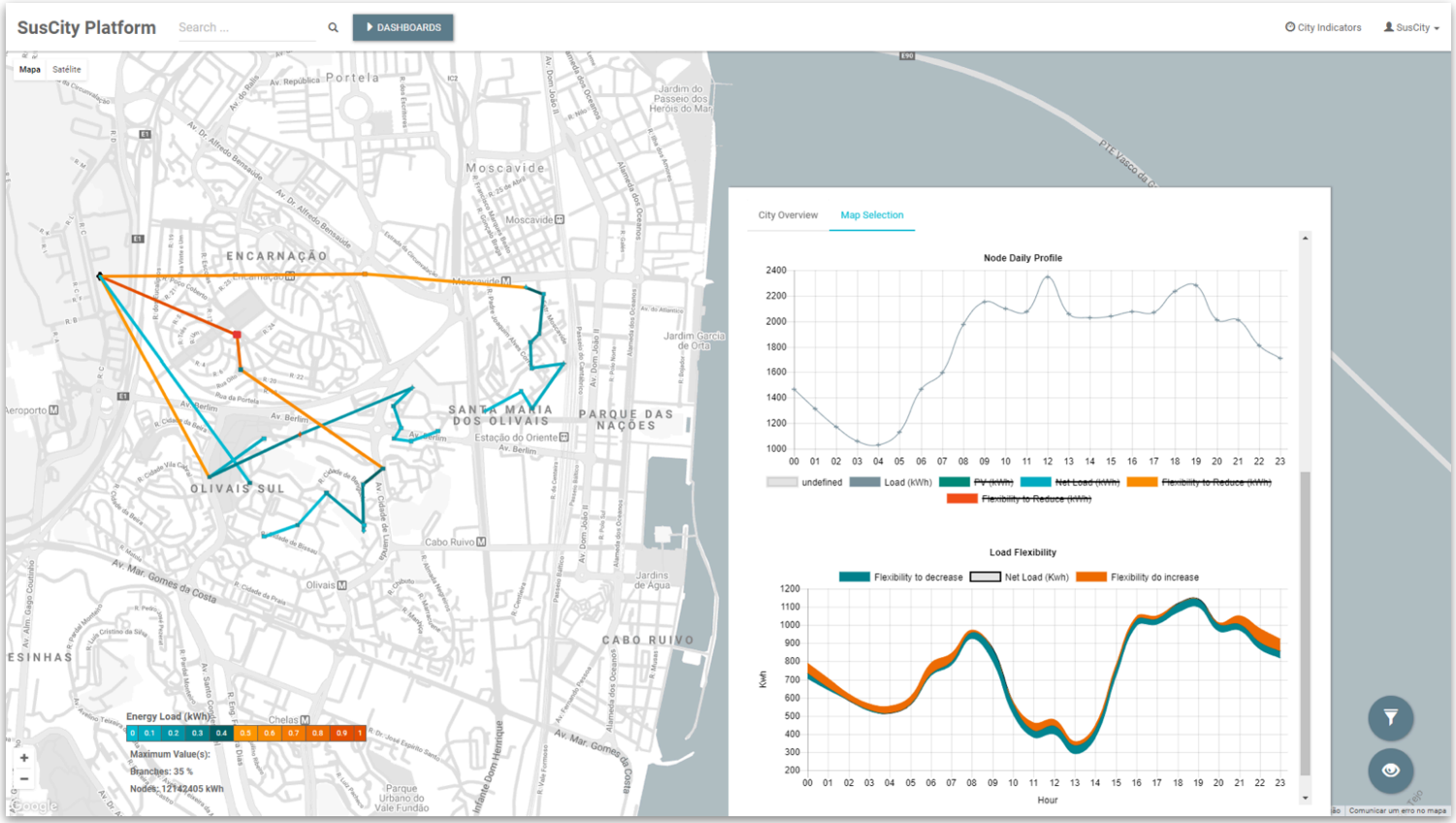


Dashboards - Archetypes Analysis

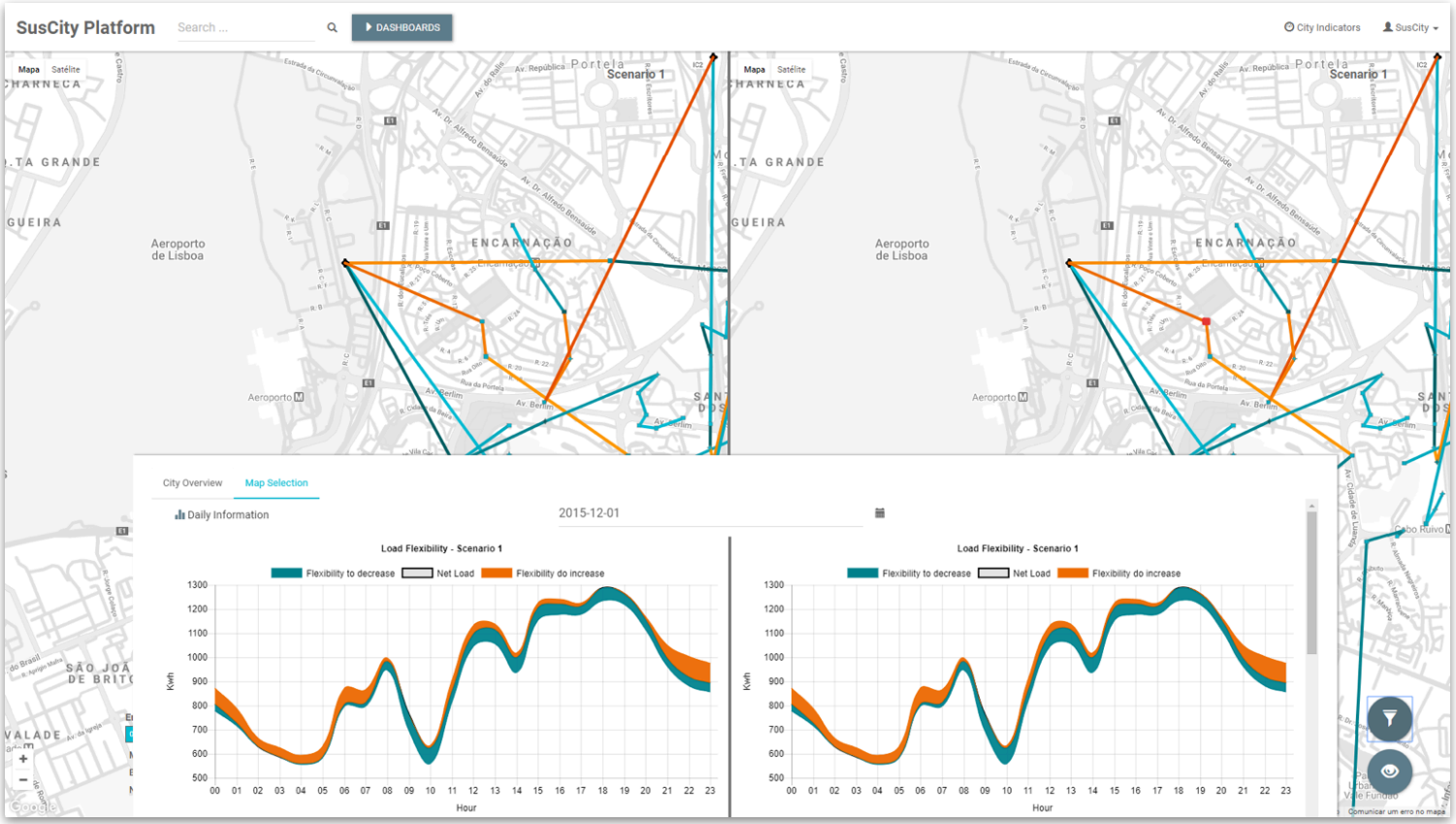


Dashboards - Street Analysis

Dashboards - Energy Grid Analysis



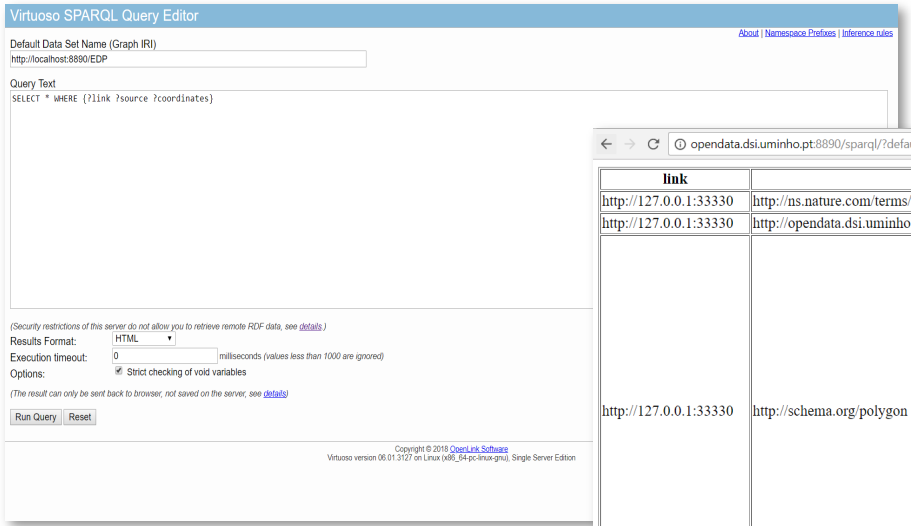
Dashboards - Energy Grid Comparison



Linked Data schemas

- Metadata Application Profiles: energy and mobility;
- Metadata schemas: energy and mobility;
- Controlled vocabularies: energy, mobility, Portuguese land registry offices.

Linked Data



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Expected impact in the city real day to day life

Decision-makers are able to

- Analyse the energy consumption by parish by hour, time period (e.g., morning or afternoon) or by quarter;
- Analyse multiple parishes, revealing specific energy consumption for specific parishes, and comparing it with the overall consumption of the city, with the goal of extracting insights regarding critical zones in the city, for example;
- Analyse the impact of cooling/heating systems, energy consumption, energy class, and envelope properties (e.g., window glass type and window materials);
- Verify energy forecasting for the next days or weeks;
- Verify mobility patterns in the city;
- Compare network characteristics with different scenarios (e.g., increase electric vehicles).

Expected impact in the city real day to day life

Linked Data:

- Benefits for the city: provide rich semantically interoperable data for use and reuse by citizens and companies;
- … thus effectively contributing to add value to the city innovation ecosystem;
- Benefits for companies: access to *good* data to provide new services for citizens companies and governments;
- Citizens: raise awareness, better informed citizens, more demanding but also more responsible and participating citizenship.

Perspectives over the future

- More data (and more sensors);
- More integration;
- Make it online with different access levels;
- European Data Portal;
- European Interoperability Reference Architecture;
- European Interoperability Framework.